Common SCADA vendor

Automating PSSM I2T goes virtual Driving safely

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WESTERN AREA POWER ADMINISTRATION

SEPTEMBER 2020

Innovating and improving







VOL. 42 NO. 9, SEPTEMBER 2020

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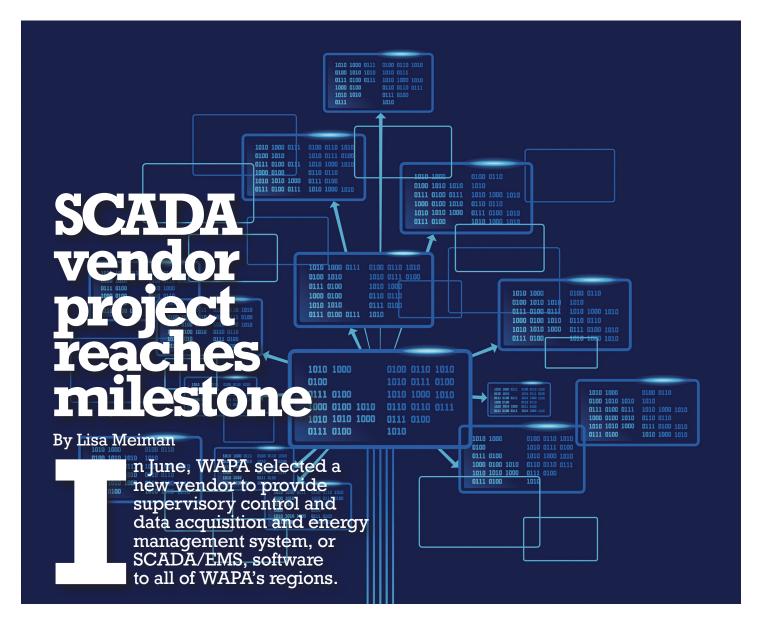
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SCADA and EMS are two of the most critical information technology systems used at WAPA. It is the grid operator's primary tool to monitor and operate the grid 24/7/365.

"This project touches every region and Headquarters," said IT Vice President of SCADA James Phillips. "Its impact will be felt for the next 15-20 years. This is not an easy project. The size, the scope and the competing needs are daunting. Dozens of personnel from multiple disciplines and multiple locations were involved with evaluating and choosing the best product for WAPA as a whole."

Monarch, from Open Systems International, is the software that was selected over the competition after a year and half of evaluation and procurement negotiations for a commercial off-the-shelf SCADA/EMS platform.

With the new common platform, WAPA's control centers will be able to partner with each other and learn from each other in ways that are not currently possible.

"For us, this project was critical for a technology refresh, to modernize the SCADA/EMS solution WAPA-wide and bring it to industry standards," said IT Project Manager **Tom Jamrowski**, who works under the Innovative Management Concepts contract. "It was also an opportunity to bring the people together who use the systems from across WAPA to make this decision. And, finally, we wanted to standardize the tool that was being used in Dispatch."

Today, WAPA has three separate SCADA systems, each with a primary and backup control center for a total of six control centers. The three distinct systems evolved independently, with different hardware, software and maintenance agreements.

Installing a common SCADA platform in WAPA's control centers will improve operational flexibility; increase reliability and cybersecurity; and avoid future support and administrative costs related to supporting multiple SCADA vendors and contracts.

"This doesn't change how Power System Operations does business," said Power System Dispatcher **Patrick Reamy**, who was one of 14 members of the evaluation team and is also serving on the new standardization team. "It's a software to operate the system in a safe and reliable state. This is a much better tool and will hopefully give us better visibility, alarming and hierarchical views to be able to perform our jobs."

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The evaluation team that selected the vendor was made up of eight operations personnel representing all four regions who will use the software in their daily jobs, four SCADA support employees and two other people from IT evaluating the network, cybersecurity and infrastructure compatibility of each of the vendors.

"Probably the biggest challenge was that we haven't done this kind of major IT purchase before," said Jamrowski. "There were no previous projects to look back to and learn from. We had to make up a lot of stuff to make this happen. We were grateful to have a lot of executive support to get over the roadblocks in this project."

The team used a full and open solicitation, meaning all vendors that believed their product could meet WAPA's needs could submit a quotation explaining their product's capabilities.

"We used a multi-faceted approach to selecting a vendor," said Contract Specialist **David Halla**. "We provided our basic requirements as part of the solicitation. The vendors submitted technical information for our review and then we watched a demonstration of their product based upon scenarios developed by the technical evaluation team. It was good to get healthy competition and see what was truly available in the market side by side to make this best value decision for all of WAPA."

The novelty of the project added additional complexity to the acquisition process.

"The request for quotation was new and different," continued Halla. "Instead of steel poles or circuit breakers where initial ordering requirements are clearly defined up front, we had a lot of different implementation strategy decisions that had to be made only after we received the quotes. The request for quotation was developed in a manner to provide WAPA that flex-



ibility and it was a unique approach for that."

Although only four vendors expressed interest, the volume of technical information submitted was immense.

"We received hundreds of pages to review and score," said Jamrowski. "We had eight categories in the request to understand the maturity of the vendor in areas, such as cybersecurity, past experience and training, and vendors had to provide documentation in every category, totaling between 30-50 pages each. Every evaluation team member had to evaluate those answers and score them."

Once that was done, the evaluation team plus the Procurement specialists met at the Electric Power Training Center in Golden, Colorado, in November 2019 to view demonstrations from each vendor.

"You can imagine people reading all this information; it all kind of melds together in your head," said Jamrowski. "When you can see it demonstrated on a screen in front of you, that is where the rubber meets the road."

After the demonstrations and scoring all responses, the team met again at the EPTC in January. The objective was to select the vendor using a "best value" approach based first on technical excellence, then cost and finally past performance. There was a week of analysis and debate about which vendor was the best solution for WAPA. Eventually, Monarch emerged as the top choice.

"It was a major accomplishment to be able to walk out with 100% alignment," said Jamrowski. "That doesn't mean that everyone got their first choice, but everyone was satisfied with the process and the final decision. This is very important because this team will be the advocates of change in the future when we go to implementation."

The final negotiations, justifications and internal approvals for the selection took more than two months before the contract was awarded. During much of evaluation, the team was under a non-disclosure agreement, meaning they could not discuss the process outside the evaluation team.

"I was very happy with the team and how they interacted," said Jamrowski. "This was a WAPA-wide pick, and there is a lot of value in that. Everyone has to go through the same change, and everyone gets the tool that they said they wanted."

"This was a huge effort and pretty far reaching in terms of involving people both supporting and using the system for the evaluation," added Halla. "By having the entire 14-member team from different regions and disciplines sit in a room together, we were able to confidently make the best decision for WAPA and its future."

Philosophy, style guide development underway

One of the next steps is producing common display configuration standards and support processes to implement the Monarch systems in all of the control centers, a task assigned to the Operator Information standardization team.

The purpose of the standardization phase is to develop configurations and support processes that provide operational efficiencies, reduce human errors, increase system resilience and enhance WAPA's ability to recover quickly from outages.

The standardization team is made up of 12 Operations and SCADA em-

ployees representing all of the regions. Most of them are new to the project as the evaluation team members rotated out. Their primary goals are to determine the WAPA-wide human-machine interface style and philosophy guidelines for the displays, including how they look and function.

"The collaboration is important because no region wants to feel left out and like the other region or regions are imposing their will," said Reamy. "All four regions have valuable input and one region may be doing something the others aren't, and it might be a better way."

The team will define the same color scheme and figures to be used across WAPA, and although the new system will permit for regional differences, operators from one region will be able to work in a different control center with minimal training.

"When I look at my Mead Substation in the new software, it shouldn't be very different than when I look at Oahe Substation in Upper Great Plains or a similar substation in Sierra Nevada," said Reamy. "There should be an overlying standardization on how the substation will be laid out. That's what we are trying to get to."

The standardization team is also working with industry partners, such as the Electric Power Research Institute, in their quest to apply leading practices based on human performance studies and the OSI vendor. One thing that supports the development of the new standards is that everyone goes through a change with the new software.

"We may not always agree, but we need to have alignment," said Reamy. "It helps that everyone will be stepping into this fresh with a brand-new shiny product. Everyone will have to change. The group of people we have are forward thinkers and will do the best for WAPA now and in the future."

This Operator Information standardization team anticipates completing its tasks by the end of 2020, paving the way for implementation preplanning to start later this year.

There are other WAPA-wide standardization efforts that will be launched as the team learns the new product and tries to gain additional operational efficiencies.

Implementation, the beginning of the end

The transition to the new software is projected to take about 16-24 months per region and will occur on a staggered schedule. Sierra Nevada will be the first to begin implementation preplanning in late 2020, followed by Upper Great Plains starting in late 2021 and finally Rocky Mountain and Desert Southwest beginning in late 2023.

"We anticipate the implementation phase to take about five years total in addition to the time we have already spent on the project," said Jamrowski. "The lessons learned with each implementation will help improve later transitions. Keeping people going in a long-running project is hard. All these people have their day jobs they



are trying to get done, but this is very important to WAPA's future."

Many on the team see the opportunity for more beneficial changes once the common SCADA system is established, including standardizing the switching process used by the craft to manually take equipment in and out of service.

"I hope it will start to snowball so that we're performing maintenance and switching the same way," said Reamy. "It will be better WAPA-wide for Maintenance and Operations personnel involved. Our Maintenance crews are traveling to different regions all the time, so if all the switching is unified, it is going to be easier for them. There won't be the discrepancies like there are right now. Even Loveland and Phoenix are different in switching."

Implementing common tools, a core tenet in the Strategic Roadmap 2024 Critical Pathway of Business, Technology and Organizational Excellence, will result in fewer maintenance, service, installation, employeetraining and other redundant costs paid separately per region for the same service. This cost avoidance will allow WAPA to redirect limited resources to other pressing priorities.

"Watching these people coalesce into an effective workgroup made me proud to be associated with them," said Phillips.

"In addition to supporting WAPA's highest goals, this project demonstrates innovation, stewardship, partnership and transparency—principles that are the foundation of IT at WAPA," said Senior Vice President and Chief Information Officer Mike Montoya. "There is no doubt in my mind that WAPA's greatest asset is its employees. They are capable of designing, deploying and maintaining whatever system WAPA needs as the industry evolves."

Note: Meiman is a public affairs specialist.

Automating process reduces errors

By Leah Shapiro

lectrical Engineer Gary Zevenbergen and Information Technology Specialist Tom Howard worked together to automate and streamline the production of more than half of one of WAPA's important safety publications, reducing one person's time investment from 250 hours to less than 10.

WAPA's Power System Safety Manual, a 300-plus page resource that is updated and published annually through the Office of Safety and Occupational Health, "details rules to perform work without incurring occupational injury or illness." Its intent "is to prevent incidents that result in personal injury, illness and property damage or work interruption."

It contains 19 sections on topics including fire protection, motor vehicles, live-line hot stick work and material handling and storage. It also includes appendices on minimum approach distances, metric conversion factors, working load limits and arc flash parameters.

The updates capture changes to procedures and safety parameters, which can be affected by changes to WAPA assets, such as transmission lines or substations.

Zevenbergen's and Howard's initiative will automate the calculation of the safety parameters that are critical in providing a safe work environment for WAPA's maintenance crews.

A complicated process

Each year around August, Zevenbergen begins the update of the safety parameters.

He performs short-circuit calculations in the ASPEN OneLiner system and imports the data to an Excel spreadsheet. He imports the transmission line lengths and distances, which are needed for future calculations, from WAPA's Geographic Information System into a separate Excel workbook. He then performs a visual inspection of the data to verify accuracy and manually executes the necessary calculations in Excel. He repeats this process for each region and consolidates the data into yet another Excel workbook that Public Affairs uses to create appendices in the PSSM.

Zevenbergen is responsible for updating about 90% of the appendices, which make up more than 50% of the PSSM, and spends about 250 hours per year on this process.

Regardless of how focused or meticulous he might be, manual data

reviews are prone to human error. Recognizing this, along with the labor-intensive process and the fact that he was the only one who knew or performed the process, Zevenbergen reached out to IT to see what might be possible.

Finding solutions

Discussions of a technology solution began back in 2012.

"It was a long road to get here," said Zevenbergen. "Once we started talking through the process, we realized it wasn't as straightforward as we originally assumed. It didn't make sense to tackle automating this piece until some other systems were integrated and we made more progress with mobile device access and cloud computing."

Zevenbergen and Supervisory IT
Specialist **John Ginkel** touched base every year or so. After the Facility Identification Renovation and GIS/Maximo Integration projects were completed and WAPA made strides toward the Modern Workplace, it was time.



Zevenbergen and Howard met last year to design the automated process. Howard created a database and imported all of the Excel data. He developed a web-based user interface that guides the user through the steps to process the data and allows them to edit the list of transmission lines, substations and other parameters used in the calculations.

"I was amazed at how complicated and time consuming the original process was," Howard said, "and how Gary had been successfully performing it for many years."

The new system connects directly to WAPA's GIS system to retrieve distances and locations of transmission structures and improves the transfer of data from the ASPEN OneLiner system. The software that performs the calculations is now managed with full version control. The updated safety parameters are sent to Safety, and ultimately to Public Affairs, for production.

The parameters will also be made available in 2021 through the GIS system at a structure-by-structure level, which provides crews higherresolution grounding requirements. This has never been done before.

"In the past, if crews had a question about a specific structure, they would call me to get a unique solution and exemption," Zevenbergen said. "Now they have direct access to more granular data at their fingertips."

A notable improvement

The new system will allow the data to be calculated more quickly and accurately than in previous years. For 2020, WAPA will be executing both the manual and the automated process to do a final check of the new process.

The Office of Safety and Occupational Health is pleased with the improvement as it supports WAPA's core value, "Do what is right. Do what is safe."

Safety and Occupational Healthy Manager **Ed Crowson** praised Zevenbergen's efforts and the IT partnership. "The PSSM appendices are integral to ensuring safety in the field," he said. "Once proven, this new system will enhance the PSSM's annual revision process, providing for distribution of the highest quality safety quidance."

"Each time employees identify and implement a process improvement, it serves WAPA as a whole," said Ginkel. "These add up over time, freeing up resources to focus on emerging issues and initiatives."

"We know this helps WAPA remain agile and prepared for the future," said Vice President of IT for Enterprise Applications **Joe Fast**. "As a strategic business partner, we are always looking for opportunities like this to work with other programs and add value. The best IT solutions are those that support solid business practices."

"Our patience paid off," concluded Ginkel. "For this solution to be a success, other pieces had to fall into place first. Gary put in an extraordinary effort over the years, and it will serve WAPA well into the future."

Note: Shapiro is a management and program analyst.

Biological strategy benefits species of concern

By Alyssa Fellow

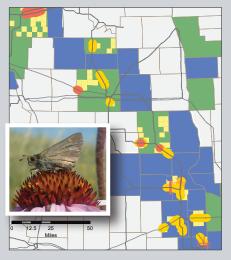
hen I started
as a biologist in
Upper Great Plains,
I was challenged to
develop a regionwide biological strategy, similar
to that which had been created for
archaeology resources.

In June, I provided some background about that effort. This time, I would like to show how the UGP biological risk assessment sets the stage for expediting Endangered Species Act compliance and doing what is right on the land.

Here are some of the ways that assessment benefits UGP's relationship with the Topeka shiner fish, piping plover bird and Dakota skipper butterfly species.

Note: Fellow is a biologist.

See "Building UGP's biological risk assessment" in the June issue of Closed Circuit.

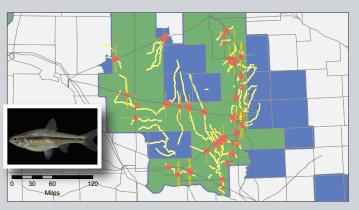


DAKOTA SKIPPER

The Dakota skipper butterfly is in the later peak of its flight period. There are about nine miles of UGP transmission line rights of way that fall within .6 miles of Dakota skipper critical habitat and about 154 miles that fall within townships that have known presence records.

It is important to reduce the spread of noxious weeds and conduct operations or maintenance activities outside of June through August, if possible, in these areas.

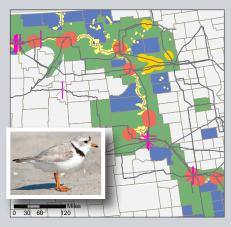
The intention is that future habitat ground-truthing fieldwork will document non-issues and substantially lessen the area of restrictions or where best management practices apply.



TOPEKA SHINER

There are 35 counties in the Topeka shiner range in UGP. Fifty streams in which Topeka Shiner live overlap with WAPA's transmission lines.

These areas are sensitive to sediment delivery and fish passage barriers, such as erosion from construction activities and improperly sized culverts.



PIPING PLOVER

If dead birds are found under our lines where they cross near nesting areas during the breeding season—late April through August—then there is an issue with piping plover mortality due to collision with transmission lines on our system. There are 84 miles where UGP transmission lines overlap the alkali lakes critical habitat of the piping plover and 47 miles of rights of way within 1.5 miles of known nests.

This information helps UGP address the piping plover recovery action to protect populations during breeding and migration. This biological risk assessment outcome also helps UGP align with WAPA's Avian Protection Plan to "conduct design, construction and maintenance activities that resolve avian issues at the earliest stage possible."

LEGEND

Transmission centerline

Counties in species range with T-line overlap

Species range

County

States

Dakota skipper legend

T-line within 0.6 miles critical habitat

T-line in townships with presence

Township with presence

Topeka shiner legend

T-line over former pCH stream segments

T-line within 100 feet of critical habitat

Formerly proposed critical habitat stream

Piping plover legend

T-line within 1.5 miles

Critical habitat under

T-line within 3 miles of alkali critical habitat

Critical habitat



Moone works in the WAPA office in Boulder City, Nevada. During a fairly standard trip to Phoenix, Moone bumped into familiar face, Randy Hammit, a friend who had recently started working in that office. They met for a bite at the Westgate Entertainment District.

"It was a typical day," Moone said. It wouldn't stay that way for long.

Walking into danger

They thought they heard fireworks. Instead, it was an assault rifle. The two scrambled for cover when they saw a victim in the middle of North Sunrise Boulevard.

No sooner had they approached the first victim than they heard a second victim at the intersection of Sunrise and West Hanna Lane. Even as gunshots ricocheted, the two proceeded to help. Putting the gunshots out of their minds they focused on saving lives.

The shooter hit a transformer, causing the power to go out. There was no telling how long it would be before help arrived. Hammit's wife Kelli, a registered nurse, ran to the scene and quickly got to work.

The three worked to stabilize the victims for about 20 minutes until the paramedics arrived.

Their bravery undoubtedly helped prevent the situation from getting even worse, and the fact that Hammit and his wife had actionable knowledge was all the better.

"I think years of first-aid training in the military and WAPA gave me the confidence to make a difference," Hammit said.

After the fire

Afterward, Moone thought about what could have happened had he been targeted directly, but in the moment, his attention was focused more constructively.

"There was nothing like a panic mode," he said. "We weren't panicking. We were like, okay, this is what we need to do. We held our composure."

The situation caused both men to think about the safety and first-aid training already offered by WAPA.

"Take your annual training seriously, because you may need it someday," advised Hammit. "Invest in some kits for your vehicle and your home."

Moone agreed. "All that CPR and first-aid training you go through does pay off," he said. "Instinctively, it all just popped into our heads. We just went to work. You say you hope you never have to use it but, believe it or not, if you do, it kicks in. We've done it. It works. The training works."

Reflecting later on the situation, Hammit was grateful to have his wife and Moone by his side. "I am a great judge of character," he concluded, "picking my friends and wife. When the chips are down, these are the types of people that run toward the gunfire."

Moone's reflections led him to consider many additional, less-tangible factors that may have been at play.

"In the aftermath the next day, what really got to me, is that he had two opportunities to shoot us," Moone said. "Two. And he never directly pointed his rifle at us and shot at us."

It's something he's been turning over in his mind ever since.

"It's like he didn't see us," he continued. "It was like there was a shield in front of us. He looked right through us and didn't even see us. I found that to be amazing. When you're 30 yards away from people, you can see them. I don't think he was even 30 yards away."

As with many things that happened that night, there will be no simple answers.

Moone believes that something—whatever it might have been—shielded and saved them that night. Two victims were saved that night as well, though their shields have names, and WAPA is proud to count them among its distinguished employees. □

Note: Teresa Waugh contributed to this story.

Initiative seeks to improve balance



By Lisa Meiman



new effort is underway at WAPA to help supervisors and managers balance staff and organization priorities. The Workload
Management Initiative
is charged with establishing the knowledge
and processes to allow
WAPA to effectively
allocate personnel for
routine operations and
maintenance work and

capital projects built into regional budgets and 10-year capital plans.

"There are two sides to the workload management seesaw," said Enterprise Risk Management Specialist **Matt Light**. "There are our resources—our people—and then the workload. This effort is going to help us understand what our capacity is to complete that expected work right now, and then we can identify and adjust to solve any imbalances."

The scope of the project is twofold: First, establish a baseline for how long it takes to complete base workload, typically considered O&M, and then evaluate how that staff will be able to accommodate long-term capital projects. The baseline assessment is designed to be a holistic cross-craft review of their workload to gain common and consistent understanding.

"Our scope is both long- and short-term," said Financial Manager **Traci Albright**. "In the short term, we want to get our arms around routine maintenance that we need to do to maintain the existing system. Once we have that, we can look at the long-term view and better address forecasting capital project timelines in the 10-year capital plans."

The core team, which is made up of employees across WAPA in a variety of disciplines, is embarking on an ambitious endeavor, trying to capture the work currently completed by craft to complete routine O&M projects.

"We have a tremendous amount of existing data that we can use to understand our baseline state and forecast what future O&M will look like, such as the Maximo database, Reliability-Centered Maintenance program and Asset Management program," said Supervisory Electrical Engineer **Travis Anderson**. "We also need to seek input directly from the craft and get their feedback. Their participation is critical for the success of this project."

The team will begin its assessment with the line crews around WAPA, partnering with them to assist with

This initiative will give us the ability to stay on our timelines and demonstrate how one project affects another to our customers.

We can be more accountable with a forecasting tool based on data.

emonstrate how one project affects to ther to our customers," said

data analysis. Afterward, the team will involve electricians, meter and relay technicians and other craft employees in the assessment.

"Our customers here are the craft and the folks trying to accomplish the work," said Light. "We're trying to get a much better picture of where WAPA stands. We have heard the need for more resources and conflicting priorities, and we want to address that gap so it is clear to everyone what our priorities are."

The team plans to complete the baseline O&M assessment for each craft discipline by the end of the calendar year.

Assessment to improve project management, communication

In addition to supporting the craft, there are many benefits to improving how WAPA schedules, prioritizes and executes its work, especially in managing and communicating project plans.

"Managers try to estimate in the job plans how long a maintenance activity will take, and there are a lot of assumptions in those estimates," said Albright. "Current job plans don't take into account the specifics of a piece of equipment or location. We want to build a bottom-up database based on the work we do and model how long it takes realistically. This is our opportunity to bring elements of uniqueness into the project planning process."

With a better project plan on hand, WAPA should also be able to better communicate budget needs to both managers and WAPA's customers, who ultimately pay for the projects through financing arrangements and power and transmission rates.

"This initiative will give us the ability to stay on our timelines and

demonstrate how one project affects another to our customers," said Albright. "We can be more accountable with a forecasting tool based on data."

"There is a lot of recognition that we have budget constraints and need to do a good job executing our priorities," Anderson added. "People are hungry for a tool that better informs how they prioritize, implement and execute projects. We will be better able to share our funding needs and why we need it."

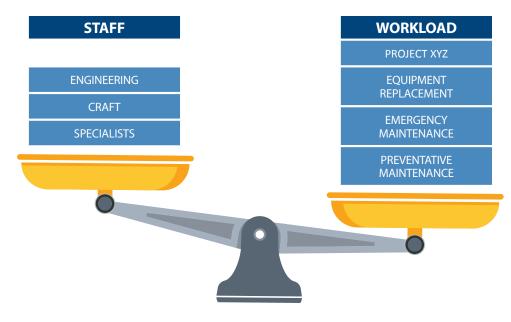
Other WAPA work groups should also be able to benefit, particularly the many functions that directly support craft employees in maintaining the grid such as Lands, Environment, Procurement, Design and Engineering and more.

"This effort will be a big driver for a lot of other organizations around WAPA," said Light. "By having a clearer picture of the project plan, those supporting offices will have a much better idea of the demands on them and be able to staff and prioritize appropriately."

In the end, though, the major benefits come back to craft employees who are on the front lines facing a large and ever-increasing mountain of work. Although some of their work will always be to respond to unexpected malfunctions or system emergencies, providing a predictable schedule for planned work may ease some of the burden.

"Our end goal is to build a better plan that supports management and staff in decision making," Albright concluded. \square

Note: Meiman is a public affairs specialist.





A major responsibility of the I2T team is to plan and execute the I2T Summit, which is a yearly event that celebrates WAPA's innovators and promotes a culture of inclusion and creativity.

Past I2T Summits had a format similar to the All-Employee Meeting: an in-person gathering broadcast to other employees across WAPA's footprint via video teleconference. However, since the COVID-19 pandemic has put a stop to in-person gatherings, the I2T Summit is going all virtual for 2020.

Many WAPA employees are conducting and participating in virtual events already; the I2T team will leverage their lessons learned to deliver a fun, engaging and relevant program straight to your desktop. The theme for the 2020 event is Innovation Takes Everyone in a Changing World.

This phrase reflects the fact that improvising to adapt and overcome requires people and teams to draw from everyone's ideas and experiences. It illustrates the importance of inclusion and highlights it as being a necessary part of innovation, especially in a changing world, such as what we are experiencing right now.

"The COVID-19 pandemic has been challenging," said Civil Rights Attorney-Adviser **Julia Duffy**. "We have all had to adapt to different work environments, different processes and a flood of new information."



Takes Everyone in a Changing World

MARK YOUR CALENDAR!

The virtual I2T Summit will be held Nov. 18 from 12:30 – 4:00 p.m. Mountain time and Nov. 19 from 9:00 a.m. – 12:30 p.m. Mountain time. More information will be shared via email and myWAPA as it becomes available.



This has been the case for all employees, to some degree, and it has left many of them working in remote locations, distant from coworkers, hampering their ability to connect in person.

Against the backdrop of the pandemic, Duffy shared that the Inclusion and Diversity Committee has asked themselves this question: In these circumstances, are inclusion and diversity still relevant at WAPA?

"The answer is a resounding yes," said Duffy. "Inclusiveness at WAPA has been visible throughout the agency's response to the pandemic. From everything IT has done to make sure we all can continue to work to the efforts by individual organizations to adapt, we see the combined efforts of many individuals contributing to innovative ideas and solutions."

This is exactly the perspective and attitude we will be spotlighting at the I2T Summit this year. "Innovation" can often seem like a vague concept, but through the many unexpected changes brought in 2020, we can see clearly just how innovative WAPA really is as an organization.

Here are just a few examples of inclusion and innovation that have been shared with the I2T Committee regarding adaptation during COVID-19:

 Toward the beginning of the increased telework period, the Colorado River Storage Project Management Center Finance team had short, daily conference calls. Over time this has evolved to having calls three times per week. This has been helpful in keeping communication flowing and keeping each other updated on important developments.

- Both the CRSP MC Finance and Environment teams, independent of each other, invited each team member to prepare a presentation on something personal. They shared pictures and narratives about their own lives, hobbies or recent vacations. This was helpful in keeping interpersonal and human relations sturdy.
- The same week WAPA started large-scale telework, the Salt Lake City area experienced a 5.7 magnitude earthquake. This was another opportunity to listen to each other and develop connections. This also allowed affected employees to share experiences and provide feedback regarding communication strategies.
- The Desert Southwest Budget team has twice-weekly video meetings for information-sharing

and updates between supervisors and team members. They use Lync and texts for less-formal communication. The team's manager has invited employees to reach

out to her, similar to an "open door policy," to virtually walk into her office and say hello.

The DSW Finance team has also made use of WebEx to host training and has even invited staff from other regions to participate as well. One example of this was when several members of the WAPA-wide Finance community teamed up for training in June. One notable logistical aspect of this training was that the instructor split the participants into groups so that they could work in smaller teams, just like splitting up tables in a room.

These are only a few of the innovative, inclusive practices that have come to pass at WAPA during the pandemic. I hope they can provide you with insight that may benefit your own teams, and I hope you will be able to join us Nov. 18-19 to help celebrate the many ideas that make WAPA such an inclusive and innovative place to work.

Note: Brusoe is an electrical engineer and I2T Committee chair. Alexander Lindstrom contributed to this story.



During May, when a large part of the country was staying home and miles driven had decreased by 25.5%, the fatality rate per miles driven shot up 23.5%. This data, collected from all 50 states by the National Safety Council, shows that drivers were more at risk of death even though they were driving less.

Vehicle accidents are the primary cause of workplace fatality. As the pandemic continues and weather changes, this is an important reminder to drive safely, especially during a time when medical care and first-responder resources are stretched thin.

Why were fatalities up?

A recent NSC online roundtable discussion identified speed, risky behavior and distraction as possible causes of increased traffic deaths during the pandemic.

"A big part of this is likely an increase in risky driving during the COVID-19 crisis," said Ken Kolosh, director of the council's statistical reporting and statistical estimating systems. "Some drivers are seeing the open roads as opportunity to speed and engage in other risky driving behavior."

Speed and risky behavior frequently go together.

The solution for speeding is easy: Slow down. Risky behavior takes more effort to change because drivers must identify why they are taking risks. Is it distraction, aggression, frustration or excitement that causes the behavior? Acknowledging the source and committing to change by obeying traffic laws is the solution.

Another risky behavior is driving under the influence of alcohol or controlled substances. The stress of the pandemic has led to increased substance abuse, which also contributes to more accidents.

Distractions

We have a lot on our minds during this pandemic, including our health, families, friends, coworkers, personal protective equipment requirements, infection rates, death counts and financial strains. Our usual routines have been disrupted and uncertainty surrounds our daily lives.

Stress, anxiety and other mental distractions can further complicate an already complex day. Allowing your thoughts to drift can divert your mind from safe driving. Do all you can to focus your attention on the moment and the road in front of you.

According to the NSC, more than 90% of auto accidents are caused by human error and distracted driving is a major cause accounting for around 25% of accidents.

Are you checking texts and emails or talking to a friend? If so, pull over or check them before you leave. Drivers can miss up to 50% of what is happening around them while talking on the phone or texting.

Texting while driving is prohibited by Executive Order 13513. It is illegal in most states and against the law in all states for commercial driver's license holders. You can stop the distraction by selecting the "Do not disturb while driving" option in your phone's settings.

When on duty...

Craft employees face several driving risks while working in the field, including long hours, fatigue, drowsiness and distraction. These challenges are compounded by new WAPA requirements related to driving alone that reduce the risk of COVID-19 infection.

"WAPA employees using vehicles on official duty will not normally share vehicles," according to WAPA's COVID-19 Vehicle Usage, Cleaning and Disinfecting Guidelines. "Each individual employee traveling will drive a separate vehicle."

Driving alone protects employees from infection, but it also poses challenges after a long workday.

Long hours, fatigue and drowsiness are all tied together and can be lessened by limiting hours on the road and planning workdays accordingly. WAPA O 440.1 – Safety and Occupational Health Program prohibits fatigued driving and combining more than 12 hours of work and travel in one day.

Most craft employees work 10-hour days, which keeps them under this

limit. In some instances, an emergency can take priority with supervisor approval. It is difficult to avoid being fatigued after a long workday. Taking breaks, staying hydrated and planning work activities to cut down on fatigue, however, can help.

Sleepy driving is similar to operating a vehicle under the influence of alcohol, according to the NSC. In fact, 20 hours without sleep is equal to driving with a blood alcohol content of 0.08%. The more tired you get, the more your attention, reaction time and situational awareness are affected.

If you are tired and fatigued, you are three times more likely to have an accident. If you are on the road and feeling drowsy, pull over at a rest stop or other safe place. Get some air, walk around and clear your head. If necessary, take a short nap.

We can all do our part to prevent vehicle accidents during this pandemic by slowing down and avoiding risky behavior, distraction and drowsy driving. By doing these things, we can protect the safety of ourselves and others, without adding to the burden of first responders and medical professionals.

Drive safely and arrive alive. \Box

Note: Robbins is a technical writer who works under the Cherokee Nation Strategic Programs contract.

For more information about WAPA vehicle usage, visit *myWAPA*, COVID-19 Updates, Guidance, Vehicle cleaning and disinfecting guidelines



Rapid Recaps

Masked men rebuild breaker

n late July, field employees from Desert Southwest donned their masks to rebuild a breaker at Glen Canyon Substation in Arizona. The substation is technically a Colorado River Storage Project facility, but DSW crews perform necessary maintenance.

Potential breaker issues were identified during a routine inspection and the crew made sure to address them without delay. "This job was identified as one that, if delayed, presented unacceptable levels of risk to system reliability," said Vice President of Transmission System Asset Management Jack Murray.

The crew collaborated with Operations and Maintenance subject matter experts to prioritize the work appropriately. As with all jobs during the pandemic, precautions against COVID-19 were taken.

"I kept thinking of a line from *The Lone Ranger*," said Murray. ""Who was that masked man?""

In this case, the masked men were Foreman II Electrician **Brian Brameier**, High Voltage Electrician **Poli Cachin**, High Voltage Electrician Apprentice **Lanny Pitts**, High Voltage Electrician Apprentice **John Johnston** and Electrician **Justin Hitzman**.







Brief Transmissions

WAPA announces CRSP MC manager

n Aug. 16, **Tim Vigil** took over as senior vice president and Colorado River Storage Project Management Center manager. He most recently served as the vice president of power marketing for CRSP.

Vigil started at WAPA in 2001 after serving in the U.S. Navy. He has worked in Rocky Mountain's Power Contracts and Energy Services office and the CRSP Energy Management and



Marketing Office. He holds a Bachelor of Arts in Economics from California State University-Northridge.

In his new role, he will lead all power marketing and operations activities for CRSP MC in Salt Lake City, Utah, and the EMMO in Montrose, Colorado. CRSP MC's 38 employees manage the sale, purchase, wheeling, interchange and transmission of energy for about 150 retail energy customers and other utilities in Arizona, Colorado, Nevada, New Mexico, Texas, Utah and Wyoming.

WAPA welcomes new CFO

n Aug. 16, WAPA welcomed Michael Peterson as its new senior vice president and chief financial officer.

Peterson has more than two decades of experience in the energy, commodities and financial markets. He has extensive experience as a principal financial officer in the electric, oil and gas business and is well versed in fiscal discipline and risk management. He has also worked with one of WAPA's tribal customers.



He has served as the principal financial officer for Red Willow Production Company, Bedrock Energy Resources and Mid-Con Energy Partners. Peterson holds a Master of Business Administration degree in International Finance from the University of Chicago, a Master of Science in Financial Markets and Trading from the Illinois Institute of Technology and a Bachelor of Arts in Political Science and Economics from the University of Denver.